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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,296	05/24/2001	Sung Bae Jun	LGE-005	9217

34610 7590 05/17/2005

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EXAMINER	
LU, KUEN S	

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/863,296	JUN ET AL.	
	Examiner	Art Unit	
	Kuen S Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-17 and 19-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-17 and 19-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendments

1. The Examiner has noted the Applicant's cancellation of claims 2 and 18, and amendments made to claims 1, 10 and 24, filed on December 8, 2004.

2. In responding to Applicants' amendments made to the Claims, filed on December 8, 2004, the Examiner has created this Office Action for non-Final Rejection (hereafter "the Action").

3. As for the Applicant's ***Remarks/Arguments***, filed on December 8, 2004, has been fully considered by the Examiner, please see discussion in the section ***Remarks***, following the Action as shown next.

Claim Objections

4. Claim 1 and 10 are objected to because of the following informalities: The terms "multimedia streams", "multimedia data" and "multimedia contents" appear in the limitations and they seem to describe the same object. The Examiner interprets the terms "multimedia data" and "multimedia contents" the same as "multimedia streams". Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 3-7, 9-14 and 16-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. (U.S. Patent 6360234 B1, hereafter "Jain"), and further in view of Ottesen et al. (U.S. Patent 5930493, hereafter "Ottesen") and Shimomura et al. (U.S. Patent 6,526,580, hereafter "Shimomura").

As per claims 1 and 10, Jain teaches the following:

"a data server system for providing multimedia data to subscribers" at Fig. 1, elements 130-140 combination is the data server and at Fig. 1, element 102 and col. 3, lines 48-52 where a live satellite feed provides multi-media to clients;

"an index server system for receiving multimedia streams transferred from the data server system to subscribers" at Fig. 1, element 110, col. 3, lines 43-46,

"extracting index data from the received multimedia streams" at Fig. 9, elements 510 and 530 where Feature Extractor Framework and Metadata Track Index Manager extract the key frames, text and summary data,

"and providing the extracted index data to subscribers" at Fig. 17, col. 3, lines 12-15 and at Fig. 9, elements 510 and 530 where Feature Extractor Framework, Metadata Track Index Manager and Output Filter Manager provide extracted index data to clients; and receiving live satellite feed at col. 3, lines 47-49,

"playing the multi-media data from the data server system" at Fig. 1, element 140, col. 3, lines 63-67,

"providing a user interface" at Fig. 1, element 130, col. 3, lines 53-58,

"to perform an indexed search and browsing using the index data provided from the index server system" at col. 2, lines 12-15, Fig. 17, col. 3, lines 12-15.

Jain does not specifically teach subscriber equipment for recording or subscribers, although Jain teaches metadata and content servers as previously described.

However, Ottesen teaches multi-media server at col. 3, lines 56-62, real-time recording and playing at col. 8, line 64 through col. 9, line 4, and subscriber set-top control system and subscriber interface at col. 3, lines 51-55.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Ottesen's teaching into Jain's because both references are devoted to multi-media distribution to the clients where fast review (Jain: vol. 2, lines 21-25) and efficient distribution (Ottesen: col. 3, lines 3-17) are critical to both Jain and Ottesen's systems and the combination of reference would have provided media content, key frames temporally indexed and subscribing services simultaneously by an integrated multi-media system.

Ottesen further teaches multi-media server (col. 3, lines 56-62) and on-demand service to a large number of subscribing customers (col. 2, lines 14-15).

Jain further teaches the following:

"index data extracted from the index server system are structural, semantic or summary data of the multimedia streams include shot or scene data described based on temporal data" at Fig. 6, where the key frames in the key frame track (element 320) provides the structural data (col. 6, lines 35-47), the cc-text track (element 322) provides the

semantic data (col. 6, lines 35-47) and the clip track (element 332) provides metadata, including the summary data (col. 6, lines 47-57), respectively;

time-stamping the extracted key frames for the purpose of correlating with the digital video or a time-code on a videotape at col. 6, lines 30-38; and

"wherein the data server system provides the multi-media streams to the index server system before providing the multi-media streams to the subscriber equipment, and the index server system extracts the index data for the multi-media streams" at Fig. 1 where multi-media streams is provided to the meta-data and content server before providing the streaming video or metadata to the client, the subscriber.

The combined teaching of Jain and Ottesen references does not specifically teach that the multi-media is provided in advance to the index server and "first provides only the extracted index data to the subscriber equipment before providing any multi-media contents corresponding to the extracted index data".

However, Shimomura teaches providing multi-media streams to servers in advance and "first provides only the extracted index data to the subscriber equipment before providing any multi-media contents corresponding to the extracted index data" at col. 11, lines 26-65 wherein web page constructing application examines content of multi-media directory and the multi-media content to locate information to be incorporated into web pages and the web server application serves the created web pages to the client systems that request the web pages.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to further combine the Shimomura reference with the

already combined teaching of Ottesen and Jain references because all three references are devoted to multi-media content distribution wherein the combined teaching of Ottesen and Jain references would have created an integrated distribution system having media content and key frames temporally indexed for quickly and efficiently delivery to subscribers while the Shimomura reference would have further enhanced the system performance by providing a multi-media rich information system that is similar to the internet for on-demand access but without the bandwidth problems associated with the internet network system.

As per claim 3, Jain teaches "the structural data of the multi-media streams include shot or scene data described based on temporal data" by extracting structural index at col. 6, lines 30-38, semantic index at col. 6, lines 30-38 and summary index at col. 6, lines 54-57 and further teaches structural index data including temporally (time-stamped) key frames at col. 6, lines 30-38.

As per claim 4, Jain teaches "semantic data of the multimedia streams include information on appearance or disappearance of objects, transition of background, occurrence and termination of event, semantic data of each section within the multimedia streams, and state of the object, wherein those information are described based on temporal data" by describing semantic index data including scene changes at col. 6, lines 30-38.

As per claim 5, Jain teaches "summary data of the multimedia streams include key frame or highlight data, or segment data related to summary/detail relationship or cause/result relationship between segments or between events, wherein such data ate described based on temporal data" wherein the summary index data including user-defined group of data which includes summary index at col. 6, lines 54-57.

As per claim 6, Jain teaches "wherein the index server system includes at least one indexing engine" at Fig. 4, element 111, "having a program therein for automatically extracting the index data" at col. 2, lines 8-15 and "an interface means for manually or semi-automatically extracting the index data by an operator" at Fig. 11, col. 4, lines 14-17.

As per claim 7, Jain teaches "...wherein the index server system includes a transmitting means for transmitting the index data to the subscriber equipment" at Fig. 1, element 112, col. 14, lines 47-49.

As per claim 9, Jain teaches subscriber system that includes a communication Interface at Fig. 1, element 150, col. 3, lines 43-47.

As per claim 11, Jain teaches "...extracting the index data is automatically performed using an index engine" at Fig. 4, element 111, col. 2, lines 8-15.

As per claim 12, Jain teaches "...the step of extracting the index data is manually performed by an operator" at Fig. 11, col. 4, lines 14-17."

As per claim 13, Jain teaches "...extracting the data is semi-automatically performed by combining an automatic extracting system...and a manual system by an operator" at Fig. 4, element 111, col. 2, lines 8-15 and Fig. 11, col. 4, lines 14-17.

As per claim 14, Ottesen teaches distributing multi-media programs concurrently to a plurality of subscriber set-top control systems at col. 3, lines 51-55.

As per claim 16, Jain teaches index data extraction in real time at col. 1, lines 66-67.

As per claim 17, Jain does not teach "store the multimedia stream", though Jain teaches "extracts the index data by indexing..." at col. 2, lines 10-15.

However, Ottesen teaches storing multimedia streams at col. 8, lines 64 through col. 9, line 4.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Ottesen's reference into Jain's system by specifically recording multimedia streams at its content server such that recorded streams could be utilized for index extraction and then playing with indexed data simultaneously at later but pre-determined time which would enhance Jain's system as a pre-produced and pre-recorded multimedia streams provider.

As per claim 19, Ottesen teaches providing pre-recorded or pre-produced multi-media streams to subscribers at col. 8, lines 64 through col. 9, line 4.

As per claim 20, Ottesen teaches providing multi-media streams to subscribers at the time as requested by implementing a set-top control system on an on-demand and pay-per-view basis.

As per claim 21, Jain teaches "the structural data of the multimedia streams include shot or scene data described based on temporal data" at col. 6, lines 30-38 where key frames are the scene data temporally indexed by timestamps.

As per claim 22, Jain teaches "the semantic data of the multimedia streams include information on appearance or disappearance of objects, transition of background, occurrence and termination of event, semantic data of each section within the streams, and state of the object, wherein those information are described based on temporal Data" at Fig. 2 and col. 11, lines 11-30 and col. 6, lines 30-38 where multimedia streams are temporally indexes.

As per claim 23, Jain teaches "the summary data of the multimedia streams include key frame or highlight data, or segment data related to summary/detail relationship or cause/result relationship between segments or between events, wherein such data are

described based on temporal data" at Figs. 2, 6 and 9, and col. 6, lines 30-38 and 48-57 where key frames are temporally indexed by timestamps and relationship between key frames and data from other tracks is shown.

As per claim 24, Shimomura further teaches "request of a subscriber equipment accessed to the index server system, only the subscriber-desired index data are provided to the subscriber equipment at the time the subscriber requested" at col. 11, lines 26-65 wherein web pages are custom created according to specific user's particular preferences.

7. Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jain et al. (U.S. Patent 6360234 B1) in view of Ottesen et al. (U.S. Patent 5930493, hereafter "Ottesen") and Shimomura et al. (U.S. Patent 6,526,580, hereafter "Shimomura"), as applied to claims 1, 10 and 19-20, and further in view of Aras et al.(U.S. Patent 5872588).

As per claims 8 and 15, the combined teaching of Ottesen, Shimomura and Jain does not specifically teach encoder or decoder as described in "...an encoder that encodes the index data to provide only permitted users with the index data, and wherein the subscriber equipment includes a decoder that decodes the index data received from the index server system", though Jain teaches index server system on extracting index data at col. 3, lines 43-46 and

Fig. 9, col. 8, lines 23-32, and transmitting index data at col. 14, lines 47-49.

However, Aras teaches decoding at col. 24, lines 44-51 and encoding at Section "AVI Encoding Mechanism", col. 11, line 43.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Ottesen and Aras' references into Jain and Shimomura's teaching by implementing encoding and decoding functions to Jain's cataloger system because without such an implementation, subscription of indexed data from the server would not be feasible, and thus the commercial potential of the index server system would not be developed.

8. The prior art made of record

A. U.S. Patent No. 6360234

B. U.S. Patent No. 5930493

C. U.S. Patent No. 5872588

L. U.S. Patent No. 6526580

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

D. U.S. Patent No. 6018744

E. U.S. Pub. No. 2002/0146233 A1

F. U.S. Patent No. 5802283

G. U.S. Pub. No. 2002/0129140 A1

H. U.S. Patent No. 5625404

I. U.S. Patent No. 5483276

J. U.S. Pub. No. 2002/0170062 A1

K. U.S. Pub. No. 2002/0161747 A1

Remarks

9. The Applicants' arguments filed on December 8, 2004 have been fully considered, but they are not persuasive, for the Examiner's response, please see discussion below.

At Pages 10-11, concerning claims 1 and 10, Applicants argued that the Jain, Ottesen or their combined teaching does not teach the amended limitation concerning the multi-media being provided in advance to the index server and "first provides only the extracted index data to the subscriber equipment before providing any multi-media contents corresponding to the extracted index data".

As to the above argument, the Examiner respectfully agrees. However, in the Action the Examiner has introduced the Shimomura reference to provide the teaching. Please see the corresponding sections of the Action.

10. Regarding claims (3-9 and 24) and (11-17 and 19-24), the claims are dependent on claims 1 and 10. The Examiner applied the stated arguments as previously described in the Office Action for the Final Rejections.

11. In light of the forgoing arguments, the U.S.C 103 rejections for Claims 1, 3-17 and 19-24 is hereby sustained.

Conclusions

12. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Mohammad Ali whose telephone number is (571) 272-4105. The examiner can normally be reached on Monday-Thursday (7:30 am-6:00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kuen S. Lu
Patent Examiner
May 12, 2005

Mohammad Ali
Primary Examiner
May 12, 2005